

REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Official Action of September 11, 2003, in view of the Request for Continued Examination filed herewith.

A request for a three-month extension of time, together with the associated fee is filed herewith.

Applicants have amended Claim 8 to specify that the claimed tire has only four different radii. Also, the relationship of the radii has been clarified in the last line of Claim 8. It is therefore believed that the previous rejection under 35 U.S.C. § 112 is rendered moot.

The rejection of Claims 8-10, 12 and 14 as anticipated by *Iwasaki* (US 6,073,668) is traversed and reconsideration is respectfully requested. In view of the amendment to Claim 8 specifying that only four radii are present, clearly distinguishes the present invention from the cited reference which does not describe a tire having only four radii.

Accordingly, withdrawal of the rejection is respectfully requested.

The rejection of Claims 8 to 10, 12 and 14, under 35 U.S.C. § 103 in view of Japan '802, taken with *Tokutake* (US 5,117,886) and optionally, *Iwasaki* (US 6,073,668), is traversed and reconsideration is respectfully requested. Applicants respectfully submit the references do not render the claimed invention *prima facie* obvious. The references relied on in the Official Action show tires with different characteristics; i.e., specific radii of curvature. None show any of the precise relationships set forth in the present claims. The Official Action takes the position that the specific values set forth in the present claims are embraced or overlap with a claimed range.

However, the combination of references contain no guidelines enabling a person skilled in the art to arrive at the particular ranges claimed herein.

Applicants respectfully submit that a person skilled in the art, without having the benefit of reading this application, would not have been lead to make the selections of the various specifically defined relationships of tire radii defined by the claims by reading the cited references. It is clear that picking and choosing portions of the prior art, while ignoring other portions, to reassemble the components of the claimed invention is not the proper test of obviousness.

As stated in MPEP Section 2141, page 2100-2114, the following tenets must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus, the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

The cited references fail to suggest the desirability of the particular numerical relationships set forth in the claims; nor do they suggest that those particular relationships would lead to a successful tire.

Japan 4-87802 discloses a tire said to have improved running performance, stability and desirability at high speeds. The tread is divided into three sections – SC, SM and SO – with very specific geometry as to the location of these sections and their relationship to the tread width WT. Section SC is defined by two points P,P located apart from each other by a factor of $0.175 \times WT$. SM is defined by points P and Q separated apart from the tire equator by a distance $0.4 \times WT$. Outer regions SO are defined by points Q and O and are spaced apart from the equator by $0.6 \times WT$. There is no mention of the relationships present in Claim 8 that define the relationship to $0.1 TW \leq TW_1 \leq 0.7 TW$. Also, JP '802 fails to disclose that the transition area to said shoulder radii is at a distance RA from tread strip edges which is 1.5 to 14% of TW. JP '802 has only three, not four, radii and no suggestion as to anything else.

Neither would a person skilled in the art be lead to make all the changes needed to arrive at applicants' invention from a consideration of the second references.

Tokutake (US 5,117,886) discloses a tire having preferably four or more radii (col. 6, lines 44, et seq.), but does not set forth the relationships expressed in Claim 8, as amended. No reason, motivation or suggestion appears in *Tokutake* which would enable a person skilled in the art to arrive at the parameters set forth in Claim 8. Nor is there any inkling as to achievement of success if such parameters were chosen. Only four specific values are mentioned in col. 5, at lines 50, et seq. by *Tokutake*. Those four values would not enable a skilled person in the art to arrive at the definitions set forth in the present claims which enable the production of successful tires.

Iwasaki (US 6,073,668) teaches that the curvature of the tire decreases continuously from the tire equator to the tread edges. Hence, a person skilled in the art would not be motivated to form a tire having four distinct sections, each with a constant radius.

To establish a *prima facie* obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916837 F2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

A statement that the modifications of the prior art to meet the claimed invention would have been "'well within the ordinary skill of the art at the time the claimed invention was made'" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ 2d, 1300 (Bd. Pat. App. & Int. 1993).

The Office Action of September 11, 2003, recognizes the shortcomings and lack of specific teachings in the accumulated prior art and takes the position that a person skilled in the art would arrive at applicants' parameters without undue experimentation. Applicants believe the Office Action is flawed in its reasoning.

First, the Office Action alleges that while JP '802 does not disclose the relationship $0.1 TW \leq TW_1 \leq 0.7 TW$, it would have been obvious to select that relationship based on JP '802 teaching that the first radius RC has a width of 35% of tread width. However, JP '802 has no teaching beyond the single value of 35% as to what direction the relationship should be modified; i.e., increased or decreased to achieve a range acceptable for producing a good tire.

And as to the distance RA in Claim 8 being 1.5 – 14% of the tread, the Office Action concludes selection of this value would have been obvious because *Tokutake's* "teaching to

locate a fourth radii at a small outmost region 26d of a tread”. Just how the value of 1.5 to 14% can be arrived at from this is not explained.

The Office Action also contains a chart to compare JP '802 with the invention. However, it should be noted that the chart is not accurate; that is, the TR_2 radius in Claim 8 is defined by the equation $0.05 TR_1 \leq TR_2 \leq 0.6 TR_1$ and when $TR_2 \leq TRA$, the relationship is $0.1 TR_1 \leq TR_2 \leq 0.95 TR_1$. The Office Action fails to show that this alternative definition appears in JP '802.

Claim 8 contains a number of limitations not expressly disclosed or suggested by the prior art, including (1) a tread strip that has been only four different radii; (2) radius TRA is determined by $0.05 TR_1 \leq TRA \leq 0.65 TR_1$; (3) when $TR_2 > TRA$, TR_2 is determined by $0.05 TR_1 \leq TR_2 \leq 0.6 TR_1$; (4) when $TR_2 > TRA$, TR_2 is determined by $0.1 TR_1 \leq TR_2 \leq 0.95 TR_1$; (5) RA is 1.5-14% TW ; (6) the areas with the radius TR_1 and encompassing the zenith of the tire is determined by a separator TW_1 ; and (7) TW_1 is determined by $0.1 TW \leq TW_1 \leq 0.7 TW$.

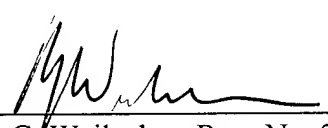
The Office Action states that a person skilled in the art would be able to determine all these conditions based on the reference disclosures. Yet, applicants respectfully submit that the Office Action fails to establish how all of these conditions and relationships would immediately be recognized by a reading of the three references. Applicants respectfully submit that on its face the Office Action fails to establish that this invention would have been *prima facie* obvious at the time the invention was made.

Application No. 09/668,292
Amend. w/Req. for RCE dated March 11, 2004

Favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

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